

Claims Status as of September 2, 2005

Claims 1-34. (cancelled)

35. (currently amended) An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least three buttresses, projecting outwardly from the exterior surface of the shell, the first buttress lying along the x-axis; the second and third buttresses disposed on opposing sides of the shell relative to the first buttress;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others; and wherein the surface portion of at least one buttress comprises two sub-portions, one above the other, the sub-portion surfaces slightly displaced relative to each other, to form a step therebetween.

36. (currently amended) The end cap of claim 40-35, wherein the shell exterior surface is curved.

37. (currently amended) The end cap of claim ~~40-35~~ wherein each buttress surface portion runs upwardly from elevation of the second end.

38. (currently amended) The end cap of claim ~~40-35~~ wherein the surface portion of each buttress is shaped as a truncated triangle with a curved apex.

39. (currently amended) The end cap of claim ~~40-35~~ wherein the second and third buttress surface portions face in opposing directions, each direction at an about 90 degree angle to the direction of the first buttress surface portion.

40. (currently amended) An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least five buttresses, projecting outwardly from the exterior surface of the shell, a first buttress lying along the x-axis; the second and third buttresses disposed on opposing sides of the shell relative to the first buttress; ~~The end cap of claim 35 which further comprises:~~ a fourth buttress positioned between the second and first buttresses; and, a fifth buttress positioned between the first and third buttresses;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others. ~~each fourth and fifth buttress having a surface portion shaped for receiving a pipe, wherein said each surface portion faces in a direction which is intermediate the surface portion directions of the two adjacent buttresses.~~

41. (previously presented) The end cap of claim 40, wherein the fourth and fifth buttresses are each smaller in height than the adjacent buttresses.

42. (previously presented) The end cap of claim 40, wherein the second and third buttress surface portions face in opposing directions, at an about 90 degree angle to the direction of the first buttress surface portion; and, wherein the fourth and fifth buttresses each face at an about 45 degree angle to the direction of the first buttress surface portion.

43. (canceled)

44. (canceled)

45. (currently amended) The end cap of claim 35 [44], wherein the step of said least one buttress is curved, to form a saddle for supporting a pipe.

46. (previously presented) The end cap of claim 45 further comprising a sub-saddle at the mid-point of said saddle.

47. (canceled)

48. (currently amended) ~~The end cap of claim 35~~ An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least three buttresses, projecting outwardly from the exterior surface of the shell, the first buttress lying along the x-axis; the second and third buttresses disposed on opposing sides of the shell relative to the first buttress;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others; and, wherein the surface portion of at least one buttress has one or more embossed circles which define sections of the surface portion which may be manually cut or torn away, to provide a hole in the buttress for a pipe.

49. (currently amended) ~~The end cap of claim 35~~ An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least three buttresses, projecting outwardly from the exterior surface of the shell, the first buttress lying along the x-axis; the second and third buttresses disposed on opposing sides of the shell relative to the first buttress;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others;

further comprising at least one stop inside at least one buttress, for limiting the inward motion of a pipe inserted through a hole cut in the surface portion thereof.

50. (currently amended) ~~The end cap of claim 35~~ An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least three buttresses, projecting outwardly from the exterior surface of the shell, the first buttress lying along the x-axis; the second and third buttresses disposed on opposing sides of the shell relative to the first buttress;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others; wherein the base flange has perforation means for receiving a splash plate; further comprising: a splash plate extending into the interior of the chamber, the plate having tabs inserted into said perforations.

51. (previously presented) An end cap for closing off the open end of an arch shape cross section leaching chamber or storm water chamber, having x, y and z axes, which comprises:

an arch shape first end lying in a vertical y-z plane, for mating the end cap with the end of a chamber;

a second end, lying in horizontal x-y plane, for supporting the end cap on a surface, having a contour which runs outwardly from the plane of the first end;

a shell having a convex shape exterior surface, connecting the first end and the second end; and,

at least five buttresses, projecting outwardly from the exterior surface of the shell; the first buttress lying along the x-axis; the second and fourth buttresses disposed on one side

of the shell with respect to the first buttress; and the third and fifth buttresses disposed on the opposing side of the shell relative to the first buttress;

each buttress comprising a surface portion shaped for receiving a pipe through which water may be flowed to or from the interior of the end cap;

wherein each buttress surface portion faces in a horizontal plane direction which is different from the others.

52. (previously presented) The end cap of claim 51 further comprising: at least one stop inside at least one buttress, for limiting the inward motion of a pipe inserted through a hole cut in the surface portion of the buttress.